



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,974	12/27/2001	Makoto Yamada	019519-343	1788
7590	03/11/2004		EXAMINER	
Platon N. Mandros BURNS, DOANE, SWECKER & MATHIS, L.L.P. P.O. Box 1404 Alexandria, VA 22313-1404			LORENZO, JERRY A	
			ART UNIT	PAPER NUMBER
			1734	

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/026,974	Applicant(s) YAMADA ET AL.	
	Examiner Jerry A. Lorengo	Art Unit 1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

(1)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 09-039420 to Usui¹ in view of U.S. patent No. 6,113,679 to Adkins et al.

Regarding applicant claim 1, Usui discloses a method of providing a protective layer on an image substrate comprising the steps of (Figure 1; abstract).

(1) Providing a substrate having an image provided via an ink-jet recording system (paragraph [0004]);

¹ A recently procured English language translation of this reference is enclosed as an attachment to this office action.

(2) Laying a protective layer imparting material comprising a protective layer which itself comprises a radiation-curing compound that is capable of being a resin upon curing disposed upon a base (support) and which is releasable therefrom (paragraphs [0004] and [0005];

(3) Laminating the ink-jet imaged surface of the substrate and the protective layer imparting material under the effects of heat such that the protective layer is bonded to the imaged surface of the substrate (paragraph [0004]);

(4) Curing the protective layer via exposure to UV radiation to bond protective layer to the ink-jet imaged surface of the substrate (paragraph [0004] and [0005]); and

(4) Releasing the base (support) from the cured protective layer bonded to the ink-jet imaged surface of the substrate (paragraph [0004]).

Although Usui disclose that the image on the substrate is formed via an ink-jet recording system, they do not specifically disclose, as per applicant claim 1, that the ink-jet ink utilized is a water-based ink comprising a colorant.

Regarding the composition of the ink, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize a water-based ink comprising a colorant, motivated by the fact that Adkins et al., drawn to ink-jet ink compositions, discloses that such water-based inks comprising a colorant (typically referred to as thermal ink-jet inks) typically do not have a binder in their composition and are thus commonly overlaminated with a clear coating that adhesively laminates to the resulting image (column 1, line 62 to column 2, line 44).

Regarding applicant claim 2, Usui, as set forth above, discloses that the method is carried out by the steps of printing, laying-up, laminating, curing and releasing.

Regarding applicant claims 4-10, Adkins et al. disclose that many types of ink-jet inks are suitable including those using water-soluble or oil-soluble dyes (Table I) as well as those wherein the colorant is a pigment disposed in a high-boiling organic solvent which is soluble in water, i.e., alcohols (Table III) and in which the particle size is less than 1.2 μ m (column 13, lines 17-21).

Regarding applicant claim 12, Usui discloses that the protective layer has a thickness of 2-360 μ m (paragraph [0007]).

Although neither Usui nor Adkins et al. specifically disclose, as per applicant claim 3, that the method utilizes a drying step after imaging, it would have been obvious to one of

ordinary skill in the art at the time of invention to do so motivated by the fact that the skilled artisan would have been appreciative of the need to ensure that the image was necessarily fixed to the substrate prior to lamination with the protective layer in order to avoid smudging of the image, especially in circumstances where the imaged substrate is non-porous or where the ink-loading on the substrate is relatively high.

(2)

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined in section (2), above, in further view of U.S. Patent No. 5,180,264 to Kojima et al.

Although neither Usui nor Adkins et al. specifically disclose, as per applicant claim 11, that the material upon which the ink-jet image is disposed comprises a support and an image receiving layer comprising a white inorganic pigment particle, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize such a material motivated by the fact that the skilled artisan would have appreciated the availability and efficacy of such ink-jet receptive recording substrates (such as that taught by Kojima et al., which comprises a support 1 upon which is disposed an ink-jet receptive layer 2 comprising a white pigment such as calcium carbonate or titanium dioxide) given that they are capable of providing a substrate with good ink absorbency enabling the formation of high optical images with vivid and uniform definition and very low print through (Figure 1; abstract; column 4, lines 35-50).

(3)

Response to Arguments

The arguments filed November 28, 2003 are acknowledged. The examiner would like to concur with the applicant's observation that applicant claims 8 and 9, although excluded from the heading of rejection in section (2) of the first office action mailed July 28, 2003, were nonetheless treated on the merits in the body of the rejection. To clarify this issue, the grounds of rejection set forth in the first office action have been repeated in sections (1) and (2), above. As such, the grounds of rejection set forth in sections (1) and (2), above, stand. The remainder of the Applicant's arguments have been fully considered but they are not persuasive.

The applicant's main argument against the combination of the Usui and Adkins et al. references is that "Adkins . . . is designed to eliminate the use of a clear coat or laminated film."² The examiner respectfully submits that the applicant's interpretation of the teachings of Adkins et al. is somewhat skewed. While Adkins et al. do disclose that the piezo inks of the invention may be printed without the use of a clear coat overlamine, they further disclose that the weather resistance of the piezo ink printed images may be further increased by using such a clear coat overlamine (Adkins et al. at column 3, lines 55-59). Therefore, the examiner respectfully submits, contrary to the applicant's argument, that Adkins et al. provides adequate and compelling motivation to utilize a clear coat overlamine, such as that disclosed by the primary reference to Usui., on a substrate imaged with their piezo ink images.

The applicant argues that even though Usui discloses imaging by inkjet printing one of ordinary skill in the art would not follow his teachings because Usui discloses that hot printing methods are preferable.

This argument is unpersuasive. "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." *In re Heck*, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)). Thus, the examiner respectfully submits that the Usui reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 10 USPQ2d 1843 (Fed. Cir. 1989).

Therefore, given these factors, the examiner respectfully submits that the rejections reiterated in sections (1) and (2) have been based upon proper motivation and suggestions in the prior art and are made final.

(4)

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

² Applicant's arguments at page 3, 3rd full paragraph.

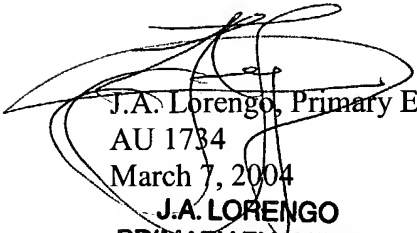
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

(5)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry A. Lorengo whose telephone number is (571) 272-1233. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J.A. Lorengo, Primary Examiner
AU 1734
March 7, 2004
J.A. LORENZO
PRIMARY EXAMINER